

# CONTENTS OF *SOIL & TILLAGE RESEARCH*, VOLUME 11

**VOL. 11 NO. 1**

**FEBRUARY 1988**

Soil macroporosity, hydraulic conductivity and air permeability of silty soils under longterm conservation tillage in Indiana J.R. Heard, E.J. Klavivko and J.V. Mannering (West Lafayette, IN, U.S.A.) .....	1
Influence of calcium carbonate on mean weight diameter of soil A.N. Al-Ani (Abu-Ghraib, Iraq) and M.J. Dudas (Alberta, Canada) .....	19
An evaluation of the wear behaviour of metallic materials subjected to soil abrasion (S. Quirke, O. Scheffler and C. Allen (Cape Town, South Africa) .....	27
Barley seedling establishment by direct drilling in a wet soil. 1. Effects of openers under simulated rainfall and high water-table conditions A.D. Chaudhry and C.J. Baker (Palmerston North, New Zealand) .....	43
Winter legume and tillage effects on cotton growth and soil ecology D.H. Rickerl, W.B. Gordon (Brookings, SD, U.S.A.) E.A. Curl and J.T. Touchton (Auburn, AL, U.S.A.) .....	63
Influence of temperature and cycles of wetting and drying on modulus of rupture R.O. Salih and A.O. Maulood (Baghdad, Iraq) .....	73
Effect of mulch rates and tillage systems on infiltrability and other soil physical properties of an Oxisil in Paraná, Brazil C.H. Roth (Berlin, F.R.G.) B. Meyer, H.-G. Frede (Göttingen, F.R.G.) and R. Derpsch (Eschborn, F.R.G.) .....	81
<b>Book Review</b>	
Erosion.....	93
<b>Guide for Authors</b> .....	97

**VOL. 11 NO. 2**

**APRIL 1988**

Root growth and phosphorus uptake in relation to the size and strength of soil aggregates. I. Experimental studies R.K. Misra, A.M. Alston and A.R. Dexter (Glen Osmond, S.A., Australia) .....	103
Root growth and phosphorus uptake in relation to the size and strength of soil aggregates. II. Prediction by a stochastic model R.K. Misra, A.R. Dexter and A.M. Alston (Glen Osmond, S.A., Australia) .....	117
The effect of aggregate size in the seedbed on surface crusting and growth and yield of wheat ( <i>Triticum aestivum</i> ), L., cv. Halberd) under dryland conditions M.V. Braunack and A.R. Dexter (Glen Osmond, S.A., Australia) .....	133
Soil and foliage arthropod communities in conventional, reduced and no-tillage corn (maize, <i>Zea mays</i> L.) systems: a comparison after 20 years of continuous cropping B.R. Stinner, D.A. McCartney and D.M. van Doren, Jr. (Wooster, OH, U.S.A.) .....	147
An economic comparison of barley production under zero and conventional tillage S.S. Malhi, G. Mumey, P.A. O'Sullivan and K.N. Harker (Alberta, Canada) .....	159
Barley seeding establishment by direct drilling in a wet soil. 3. Comparison of six sowing techniques C.J. Baker, J.A. Springett (Palmerston North, New Zealand) and A.D. Chaudhry (Faisalabad, Pakistan) .....	167

- The effect of tillage practices on distribution, size, infectivity and propagule number of the take-all fungus, (*Gaeumannomyces graminis* var. *tritici*)  
P.J. Cotterill and K. Sivasithamparam (Nedlands, W.A., Australia) ..... 183

**VOL. 11 NOS. 3-4****JUNE 1988****Special Issue: PROCEEDINGS 11TH CONFERENCE OF ISTRO TILLAGE AND TRAFFIC IN CROP PRODUCTION****Guest Editorial**

- The 11th Conference of ISTRO, an opportunity for appraisal and advancement  
B.D. Soane (Penicuik, Midlothian, Gt. Britain) ..... 197

**Advances in characterization of soil structure**

- A.R. Dexter (Glen Osmond, SA, Australia) ..... 199

**Vehicle and wheel factors influencing soil compaction and crop response in different traffic regimes**

- I. Håkansson (Uppsala, Sweden), W.B. Voorhees (Morris, MN, U.S.A.) and H. Riley (Nes-Hedmark, Norway) ..... 239

**Weather and other environmental factors influencing crop responses to tillage and traffic**

- F.R. Boone (Wageningen, The Netherlands) ..... 283

**Theoretical soil mechanics and implement design**

- D.R.P. Hettiaratchi (Newcastle Upon Tyne, Gt. Britain) ..... 325

**Advances in modeling machine-soil-plant interactions**

- A. Hadas (Bet Dagan, Israel), W.E. Larson and R.R. Allmaras (St. Paul, MN, U.S.A.) ... 349

**ISTRO-INFO** ..... 373**Reading Table** ..... 397**Author Index** ..... 403

